

Upper Missouri Headwaters Channel Migration Map Development

River corridors contribute directly to the health of many of Montana's communities. However, communities located within dynamic river corridors are also faced with unique challenges to human safety and resource management. The 2011 floods are an urgent reminder of the need for a better understanding of the power and nature of our rivers. This project provides key datasets for developing **comprehensive river hazard mapping** and crucial tools for understanding and managing six key river corridors in the project area. Goals include:

1. Channel Migration Mapping for select rivers.
2. Floodplain mapping scoping for select rivers (supports 1971 state legislation requiring a Floodplain Mapping Plan).
3. Educational opportunities for stakeholders on use of the mapping.
4. Extensive mapping data provided to stakeholders and the State Library.
5. Move efforts towards a comprehensive river hazards mapping approach recommended by the 2011 report *Montana Floodplain Management Assessment: Strengthening Policies and Programs that Reduce Flood Risk and Protect Floodplains*.

Channel Migration Mapping (CMM) mapping uses the historic footprint of rivers to quantify rates of change and develop a predicted 100-year dynamic river corridor based on erosion rates. This is a separate hazard from floodplain mapping. CMM serves as a science-based tool to help the public, landowners, and decision makers develop an understanding of river dynamics, along with the inherent risks and benefits associated with those processes.

The Ruby Valley Conservation District will oversee the work. A contractor knowledgeable in CMM and floodplain processes will perform the actual work. The project area includes approximately 510 channel miles on six of the nine mainstem rivers of the Upper Missouri River watershed: Gallatin, East Gallatin, Beaverhead, Madison, Jefferson, and Ruby Rivers. Seven counties, eight conservation districts, and numerous communities are included in the project area. The work will be completed within two years of project initiation.

Upper Missouri Headwaters Watershed Mapping Priorities

